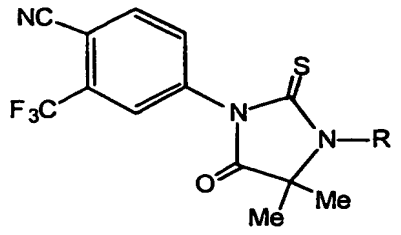
CLAIMS

WHAT IS CLAIMED IS:

1. A composition of matter comprising a compound having the formula



wherein R is $(CH_2)_nN_3$ or $N_3C_6H_4$ and where n is from 3 to 8.

2. A pharmaceutical composition comprising a compound according to claim **1** and a pharmaceutically acceptable carrier for said compound.

3. A method of inhibiting prostate specific antigen production in a mammalian prostate cancer cell, the method comprising contacting said mammalian prostate cancer cell with a sufficient amount of a compound according to claim **1**, such that prostate specific antigen production in said mammalian prostate cancer cell is inhibited.

4. A method of inhibiting the growth of a human prostate cancer cell, the method comprising contacting said human prostate cancer cell with a therapeutically effective amount of a compound according to claim **1**, such that growth of said human prostate cancer cell is inhibited.

5. A method of antagonizing the function of the ligand binding domain of the androgen receptor polypeptide in a prostate cancer cell, said method comprising the step of contacting said prostate cancer cell with a sufficient amount of a compound according to claim **1**, such that the function of the ligand binding domain of the androgen receptor is antagonized.

6. A method of antagonizing the effect of an androgen on a function of the ligand binding domain of the androgen receptor polypeptide in a prostate cancer cell, the method comprising the step of contacting said prostate cancer cell with a sufficient amount of a compound according to claim **1**, such that the effect of an androgen on a function of the ligand binding domain of the androgen receptor polypeptide is antagonized.

7. A composition of matter comprising a compound that inhibits the growth of hormone refractory prostate cancer cells, wherein said compound has been previously subjected to a method of examining the physiological effect of said compound on a mammalian prostate cancer cell wherein said prostate cancer cell expresses an exogenous wild type androgen receptor polynucleotide that encodes an androgen receptor polypeptide or an androgen receptor polypeptide variant, said cell further comprising an abnormal level of mRNA that encodes said androgen receptor polypeptide or said androgen receptor polypeptide variant when compared to the level of mRNA that encodes said androgen receptor polypeptide or said androgen receptor polypeptide variant in a normal prostate cell, said method comprising:

(a) determining that said abnormal level of mRNA in said prostate cancer cell is at least two fold higher than the level of mRNA in said normal prostate cell;

(b) contacting said compound with said prostate cancer cell to provide a treated prostate cancer cell; and

(c) examining one or more physiological characteristics of said treated prostate cancer cell.

8. A composition of matter comprising a compound that inhibits the growth of hormone refractory prostate cancer cells, wherein said compound has been previously subjected to a method of examining the physiological effect of said compound on a mammalian prostate cancer cell wherein said prostate cancer cell expresses an exogenous wild type androgen receptor polynucleotide that encodes an abnormal level of androgen receptor polypeptide or an abnormal level of androgen receptor polypeptide variant when

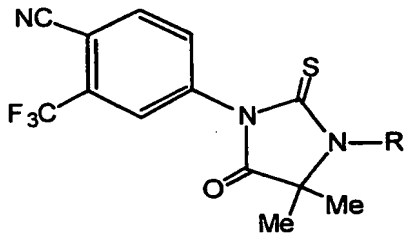
compared to the level of androgen receptor polypeptide or androgen receptor polypeptide variant encoded by a normal prostate cell, said method comprising:

(a) determining that said abnormal level of androgen receptor polypeptide or said abnormal level of androgen receptor polypeptide variant is at least two fold higher than the level of androgen receptor polypeptide or androgen receptor polypeptide variant in said normal prostate cell;

(b) contacting said compound with said prostate cancer cell to provide a treated prostate cancer cell; and

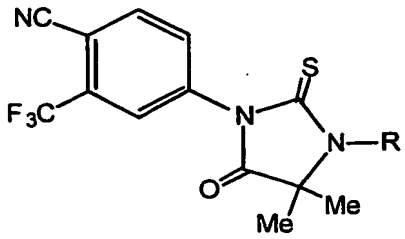
(c) examining one or more physiological characteristics of said treated prostate cancer cell.

9. A composition of matter according to claim 7 wherein said compound has the formula



wherein R is $(CH_2)_nN_3$ or $N_3C_6H_4$ and where n is from 3 to 8.

10. A composition of matter according to claim 8 wherein said compound has the formula



wherein R is $(CH_2)_nN_3$ or $N_3C_6H_4$ and where n is from 3 to 8.

11. A method for making a composition of matter comprising a compound that inhibits the growth of hormone refractory prostate cancer cells, wherein said method comprises the initial step of examining the physiological effect of said compound on a mammalian prostate cancer cell wherein said prostate cancer cell expresses an exogenous wild type androgen receptor polynucleotide that encodes an androgen receptor polypeptide or an androgen receptor polypeptide variant, said cell further comprising an abnormal level of mRNA that encodes said androgen receptor polypeptide or said androgen receptor polypeptide variant when compared to the level of mRNA that encodes said androgen receptor polypeptide or said androgen receptor polypeptide variant in a normal prostate cell, said initial step comprising:

(a) determining that said abnormal level of mRNA in said prostate cancer cell is at least two fold higher than the level of mRNA in said normal prostate cell;

(b) contacting said compound with said prostate cancer cell to provide a treated prostate cancer cell; and

(c) examining one or more physiological characteristics of said treated prostate cancer cell.

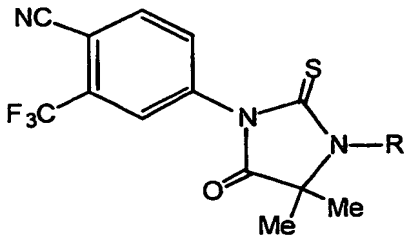
12. A method for making a composition of matter comprising a compound that inhibits the growth of hormone refractory prostate cancer cells, wherein said method comprises the initial step of examining the physiological effect of said compound on a mammalian prostate cancer cell wherein said prostate cancer cell expresses an exogenous wild type androgen receptor polynucleotide that encodes an abnormal level of androgen receptor polypeptide or an abnormal level of androgen receptor polypeptide variant when compared to the level of androgen receptor polypeptide or androgen receptor polypeptide variant encoded by a normal prostate cell, said initial step comprising:

(a) determining that said abnormal level of androgen receptor polypeptide or said abnormal level of androgen receptor polypeptide variant is at least two fold higher than the level of androgen receptor polypeptide or androgen receptor polypeptide variant in said normal prostate cell;

(b) contacting said compound with said prostate cancer cell to provide a treated prostate cancer cell; and

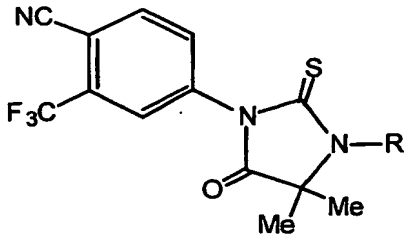
(c) examining one or more physiological characteristics of said treated prostate cancer cell.

13. A method for making a composition of matter according to claim **11** wherein said compound has the formula



wherein R is $(CH_2)_nN_3$ or $N_3C_6H_4$ and where n is from 3 to 8.

14. A method for making a composition of matter according to claim **12** wherein said compound has the formula



wherein R is $(CH_2)_nN_3$ or $N_3C_6H_4$ and where n is from 3 to 8.